A STUDY ON LINKAGES, ACCESS TO FINANCE AND PERFORMANCE OF CLUSTERS WITH SPECIAL REFERENCE TO AGRA REGION

A

SYNOPSIS

Submitted for registration to the degree of

Doctor of Philosophy (Ph.D)

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1.0 INTRODUCTION

1.1 BUSINESS CLUSTER:

A Business cluster is a geographic concentration of interconnected businesses, suppliers and associated institutions in a particular field. Clusters are considered to increase the productivity with which firms can compete nationally and globally.

The term Business Cluster also known as Industry Cluster or Competitive Cluster was introduced and popularized by Michael Porter in 'The Competitive Advantage of Nations (1990). Michael Porter claims that clusters have the potential to affect competition in three ways:

- By increasing the productivity of the firms in the cluster
- By driving innovation in the particular business field and
- By stimulating same type of new businesses in the field

1.2 TYPES OF BUSINESS CLUSTERS:

- **Geographical Business Clusters:-** Business Clusters that are famous for their geographical locations are called geographical business clusters.
- **Sectoral Business Clusters:-** This type of clusters have all type of businesses related to a particular sector at one place.
- **Horizontal Business Clusters:-** Horizontal Business Clusters are clusters of those businesses which have the same product line in their business.
- **Vertical Business Clusters:-** Vertical Business Clusters include the businesses with other level of same sector of business like supplier businesses and producer businesses in same group.

This study is motivated by the increasing importance of clusters in India's economy and the continuing financial constraints faced by them. The cluster development has been identified as one of the strategies for generating industrialization, employment generation and poverty reduction in India. This study will also examine whether cluster formation is helpful in accessing financial resources easily, whether networking among the cluster's firms improves the information sharing and also whether linkages with financial institutions improve their performance.

Lack of access to financial services is one of the main problems facing clusters in India **(Nagesha, N. and Balachandra, P., 2006).** This has been attributed to a number of factors. Conceptually, the nature of credit markets, which are segmented and incomplete, is one explanation. Market segmentation implies that the demand for, and supply of, financial services do not interact. Due to the risky and temporal nature of credit trade, information requirements and enforcement problems for lenders are high, resulting in agency costs that affect the outcome of credit programs targeted towards the Small Scale Industries. As a result, firms requiring funds from external sources, fail to apply because of the high costs involved. While the overall financial market involvement of firms may be limited, smaller businesses have much less involvement than the larger ones **(Bigsten et al. 2000)**. On the supply side, most formal financial institutions may also consider clusters less creditworthy due to their lack of growth potential and comparatively small size activities.

The slow growth of firms has been attributed by some researchers to the lack of access to financial resources **(Nkurunziza 2005)**. Access to external resources is needed to ensure flexibility in resource allocation and to reduce the impact of cash flow problems **(Bigsten et al. 2000)**.

Firms with access to funding are able to build up inventories to avoid stocking out during peak demands also the availability of credit increases the growth potential of the surviving firms during periods of economic instability. Firms without access to institutional funding are more vulnerable to external shocks **(Nkurunziza 2005)**. Thus, the lack of access to credit remains a major constraint for

the firms in India. Studies done in various countries show that linkages provide an important avenue through which firms can overcome some of these constraints and achieve goals.

Such goals may include better access to information, product, markets, or financial services. Networks, such as associations, also serve as bridge and thus enable small firms to access different services. The question, therefore, is how these linkages can contribute to the development of these small firms in clusters by improving their access to financial services.

The characteristics of firm like history, ownership, size and sources of finance are also important in determining the development of firm linkages and their contribution to enterprise performance. The nature of linkages and their benefits to firms are likely to differ according to firm size. Various studies show that large firms are more likely to receive more loans, have higher indebtedness, rely less on informal loans, and have better access to credit than small firms, the majority of which get their loans from informal financing sources **(Bigsten et al. 2000)**. Firms also have different types of linkages: large firms, as opposed to small businesses, are more likely to have extended networks that provide information on markets and technology **(Barr 1998)**.

In determining the linkages and access to services like finance as well as enterprise performance, ownership and size are important characteristics. Enterprise ownership is associated with the firm's ability to mobilize financial resources **(Ikiara et al. 2002)**.

One of the main reasons why firms form linkages is the ultimate improvement of their performance. Firm performance can be measured with different indicators, such as profitability, growth in employment, production level, or even sales. In addition, firms also have their own performance indicators **(Meyanathan and Munter 1994; McCormick and Atieno 2002; Okech, Mitullah and Atieno 2002)**.

Based on the hypothesis that linkages improve firm performance, researcher will analyze the performance of the enterprises in relation to the different kinds of linkages. Using selected indicators, we compare the enterprises with various linkages against those without similar relationships.

Indicators to measure Financial Performance:

- Production Volume
- Temporary Employment
- Permanent Employment
- Sales Volume
- Profit Level

These above parameters will analyze based on the firms having linkages with financial institutions with those who do not have linkages with financial institutions to measure the impact of forming linkages on financial performance of the firm.

1.3 ROLE OF INFORMATION ACCESSING AND SHARING IN CLUSTER BUSINESSES:

Networking among firms in a cluster happens through industry associations or local business associations and similar such arrangements .Information accessing and sharing among the networking firms helps in gaining various information about technology, operations, efficiency and productivity.

The information which is available with one firm can be easily accessible by other firms also because the firms are closely related with each other in direct or sometimes in indirect way **(Lode Li 2002).** The cost of getting the information by the firm in cluster is low due to availability of same types of businesses in large quantity. Access to information helps the firms in various managerial as well as operational decisions like:

- Improvement in business processes
- Encouragement of human resources
- Development of competitive spirit
- Protesting in strategy formulation and implementation

2.0 REVIEW OF LITERATURE

A detailed survey of the concerned literature has been carried out based on various Journals, Research Papers, Articles and Magazines. Some of the studies are presented below and remaining studies were included in the references.

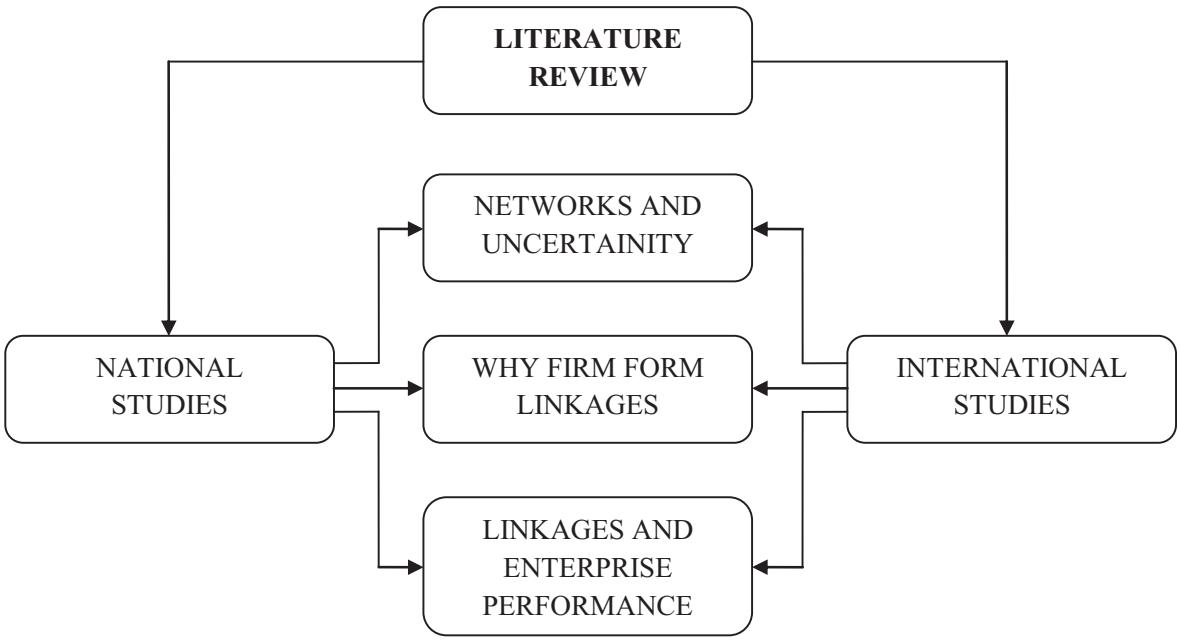

Figure 2.1 : Literature Review at a glance

2.1 NETWORKS AND UNCERTAINTY

Barr (1998) Interrelation networks can enhance the performance of firms by improving their income-generating ability and capacity to compete with other firms. In addition, they can also help reduce the uncertainties faced by enterprises, by providing entrepreneurs with information on various aspects

such as markets, technology and finance. Information on output markets, their functions and standards may help firms become more competitive, and thus have a direct effect on performance. A network that reduces uncertainty may increase performance indirectly by encouraging higher levels of investments. It is argued that the relative importance of the two functions to an entrepreneur will determine the kind of network he will maintain, and the effect of these networks on its performance.

Okten and Osili (2004) In most Asian countries, uncertainties are caused by poor contract disciplines, resulting from poverty and unanticipated difficulties arising from shortage of inputs, delayed payments and transportation problems. However, information disbursement and the associated high transaction costs make it difficult for entrepreneurs to identify poor contract enforcement that results from such difficulties as opposed to those resulting from incompetence. Thus, to reduce information disbursement, entrepreneurs in most Asian countries rely on networks to facilitate information flows, and provide a basis for credit, trade and insurance. Networks also affects individual access to credit sources, thus lowering transaction costs, and individual with strong family and community networks will have greater access to these credit because of the advantage of their informative links.

Fafchamps (1999) argues that transaction costs induce market participants to enter into long- term trading relationship that shapes market outcomes. He identifies two types of institutions that have arisen to minimize transaction cost: relationship and the sharing of information through networks. Market entry due to network externalities is likely to be easier for network members than non-members. Network tends to steer potential investors towards sectors that have benefits derived through network externalities.

2.2 WHY FIRMS FORM LINKAGES

Firms form links in order to attain objectives they could not achieve alone. Linking enables firms to overcome some of their constraints like the lack of finance, access to raw materials, market information, and technology. Small firms are constrained mostly by the lack of working and investment capital; hence many firms form linkages and relations for the specific purposes of acquiring finance and other services. Linkage between firms can ease such constraints by reducing the required amount of fixed capital while vertical linkages between producers and suppliers may bring credit to ease working capital requirements. Linkages may also provide access to new sources of capital, through membership in group- lending schemes, where micro enterprises join together to guarantee loans for each other. Small firms may also link with larger businesses to take advantage of important firm- survival techniques: superior management capability, technology, market information, and finance **(Meyanathan and Munter 1994)**.

Linkages offer a number of potential benefits to firms: helping to improve firm performance by reducing marketing costs, increasing firm flexibility, improving skills and their diffusion, as well as providing information- sharing **(McCormick and Atieno 2002)**. Linkages, in the form of network, also help to reduce the uncertainties faced by enterprises. The main line of discussion in this research is thus identifying the different types of linkages that exist between enterprises and their associated benefits for the firms in the clusters.

2.3 LINKAGES AND ENTERPRISE DEVELOPMENT

Institutions have been defined as a set of rules governing behavioral relations among individuals and groups **(Nabli and Nugent 1989)**. Institutions are predictable, understood as either formal or informal entities such as labour unions, markets, contracts, as well as cultural rules and codes of conduct **(Nabli and Nugent 1989)**. The importance of institutions derives from the fact that economic action is interrelated in a social context **(Granovetter 1985)**. Hence an entrepreneur, being a socially

embedded individual, will use his personal networks for the benefit of the enterprise. The status of the person within a network and the power associated with that position determine what benefits will accrue to the enterprise. Relationship networks shape the form of the ensuing market exchange. Market entry, due to the externalities generated by the networks, is easier for network members than for non- members **(Fafchamps 1999)**.

Linkages can be perceived as either a part of a wider network of social relationships, or more specifically as interaction between individuals and organizations **(McCormick and Atieno 2002)**. Linkages can be classified into contracts, collaborations, contacts, and associations. This research, with its emphasis mainly on economic relationships, focuses on linkages between firms and financial institutions rather than linkages constituting a wider network of social relations. Linkages affect firm performance in various ways. **Barr (1998)**, using data from manufacturing firms identifies common patterns that link types of enterprises and networks and their structure as well as effect. He concludes that networks impact on enterprise performance through various channels and to a different extent, depending on the function these networks perform. Entrepreneurs of larger enterprises tend to maintain large, diverse and less diversified innovation networks, which are better suited to the provision of information on technology and markets. Smaller enterprises tend to maintain small homogeneous and diversified networks aimed at reducing information disbursement and thus supporting informal credit and risk-sharing arrangements.

Associations are one major form of institutional networks. Firms join associations for a number of reasons, one of which is the building of social capital in order to establish contacts that may help them in the future. The size of the association is important in identifying the benefits to its members. The nature and relative importance of private or interrelated effects also vary between small and large networks. Small networks tend to generate significant positive interrelations within these networks; it is difficult to exclude individuals from mutual benefits. Large networks, common among large enterprises, tend to generate high private returns **(Barr 1998)**.

While networking provides additional benefits there are additional associated costs. In the advanced clusters of Asia, it was found that networks and mutual action among them results in better information disbursement **(Barr 1998)**.

2.4 NEED OF THE STUDY

In present scenario Small Scale Industries (SSI's) are a very important part in the development of Indian Economy. This sector employs up to 59.7 million people. The increasing number of Small Scale Industries motivated to conduct this study. This study will be helpful in the following ways:

- This study describes the impact of forming clusters for same type of businesses in accessing various financial resources.
- This study will evaluate how firms within the clusters form linkages with the financial institutions to get the funds for their business so that the firms can improve their financial performance.
- This study will also help in measuring the importance of information availability and sharing to form the network with the firms within the cluster.

2.5 OBJECTIVES OF THE STUDY

The objectives of the study are as follows:

1. To study the impact of clusters on accessing financial resources.
2. To study the impact of linkages with financial institutions on financial performance of clusters.
3. To study the impact of networking among firms in a cluster on information accessibility & sharing.
4. To suggest some strategies for better financial performance of firms in clusters.

3.0 RESEARCH DESIGN & METHODOLOGY

3.1 CONCEPTUAL FRAMEWORK AND METHODOLOGY

To develop a conceptual framework literature review of three distinct streams were incorporated: Access to financial resources, Linkages with financial institutions and Networking among firms and literature on relationship among these variables.

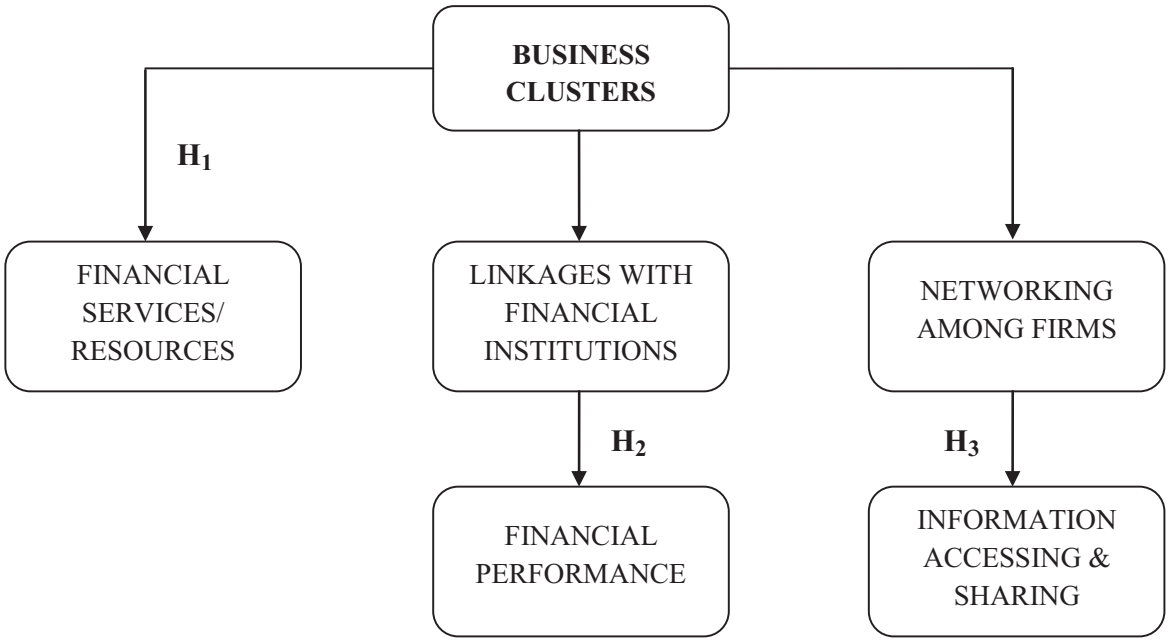

Figure 3.1 : Conceptual framework

3.2 METHODOLOGY

This study will be a Descriptive as well as Analytical study based on the survey technique where first the elements will be identified for various variables and then it will be analyzed.

3.3 HYPOTHESIS DEVELOPMENT

For analyzing the above stated objectives researcher have formulated the following research hypothesis:

1. $H_0$1 : There is no significant difference between access to financial information between the firms in the clusters and the firms which are not in the clusters.

   H_a1 : There is a significant difference between access to financial information between the firms in the clusters and the firms which are not in the clusters.

2. $H_0$2 : There is no significant difference between the financial performance of the firms with access to financial services and the firms without access to financial resources.

   H_a2 : There is a significant difference between the financial performance of the firms with access to financial services and the firms without access to financial resources.

3. $H_0$3 : There is no significant difference in the availability of information between the firms in the clusters and outside the clusters.

   H_a3 : There is no significant difference in the availability of information between the firms in the clusters and outside the clusters.

3.4 SCOPE OF THE STUDY

Small business clusters in Agra region has been taken in this study as there are many small business clusters operating in Agra region.

3.5 SOURCES OF DATA:

For fulfilling the above proposed objectives researcher will use both **Primary** as well as **Secondary Data.**

3.5.1 PRIMARY DATA:

Primary data will be collected from the leaders of clustering firms with the help of structured questionnaire and interview.

Questionnaire: A structured questionnaire is prepared and gets it filled by the respondent to gather the data about:

- How clusters help in acquiring various financial resources.
- Effect of linkages with financial institutions on financial performance.
- How the networking with other firms affect information availability.

Interview: Researcher will conduct interviews with the owners/ managers of firms for getting data which cannot be collected through questionnaire like experiences and various other qualitative aspects.

3.5.2 SECONDARY DATA:

Secondary Data for the study will be collected through:

- Magazines
- Journals
- News Papers
- Websites
- Books
- Online Resources.

3.6 SAMPLING TECHNIQUES:

In conducting this study first researcher has identified the **Population of the Study**. After identifying the population of the study researcher has used **"Simple Random Sampling"** for selecting the Sample Size and for collecting the data from the respondent within the population.

While selecting sample size all population has added then sample size is calculated on the total population at 95% level of confidence and 10% confidence interval. After calculating total sample

size the “Proportionate Distribution” has been made to calculate the sample size of individual cluster unit. A minimum sample size of 5 units for each type of cluster is ensured.

S. No.	Cluster Unit	Population	Sample
1	Pottery	400	5
2	Cross Beads	4500	40
3	Stone Craft	2500	23
4	Carpet	90	5
5	Leather Footwear	3000	27
Total		**10490**	**100**

Table 3.1 : Calculation of Sample Size

3.7 TOOLS FOR DATA ANALYSIS:

To test the data scientifically researcher will keen to analyse data by using the appropriate statistical methods:

- The hypothesis that there is no significant difference between access to financial information between the firms in the clusters and the firms which are not in the clusters will be tested using 'Z Test' based on following financial services:

1. Current Accounts
2. Overdraft Facilities
3. Cash Credit Facilities
4. Term Loans (Short/ Medium)

- The hypothesis there is no significant difference between the financial performance of the firms with access to financial services and the firms without access to financial resources will be tested using 'Chi- Square Test' based on following parameters :

1. Production Volume
2. Temporary Employment
3. Permanent Employment
4. Sales Volume
5. Profit Level

- The hypothesis that there is no significant difference in the availability of information between the firms in the clusters and outside the clusters will be tested using 'Correlation Analysis' and 'Z test' between the firms which are in networks and not in networks and the information availability in 4 key areas:

1. Technological Advancement
2. Availability of Human Resources
3. Efficiency and Cost
4. Understanding Environment

3.8 PROPOSED CHAPTERS:

1. Introduction
2. Review of Literature
3. Research Methodology
4. Analysis of Data
5. Findings
6. Conclusion and Suggestions

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